



ecology and environment, inc.

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International Specialists in the Environment

MEMORANDUM

TO: Paul Doherty, EPA/DPO
FROM: Janice Frizzell, E & E/TATM *JF*
THRU: Joe Chandler, E & E/TATL *JCC*
DATE: August 29, 1991
SUBJECT: Data for Dugan-Helterbrand Samples
TDD#: T07-9104-019B
PAN#: EM00919FBA

Site:	Dugan Helterbrand
TDD#:	EM00919FBA
Page:	2.3
Date:	9-29-91

The following is a summary of the data review conducted by the Ecology and Environment, Inc., Technical Assistance Team (E & E/TAT) for two wood shaving samples submitted to General Physics Corporation in Gaithersburg, Maryland for analysis for total metals and cyanides by Contract Laboratory Program (CLP) protocol. This data review was conducted according to the three levels of data review for Region VII SOP No. 1610.2A, "Minimal Review (level II)". The results were coded according to the "Functional Guidelines for Evaluating Inorganics Analyses" and OSWER Directive 9360.4-01 with the following codes:

- J = The associated value is an estimated quantity because the reported concentrations did not meet quality control criteria.
- UJ = The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria was not met.

The overall quality of the data was good although it should be kept in mind that CLP protocol is intended for soils and water samples and that the sample matrix submitted (wood shavings) may be inappropriate for CLP protocols. Possible matrix interference was noted in the analyses for metals as the Matrix spike recoveries were low for some analytes. The values for manganese and cyanide were (J) coded as estimated values because they did not meet quality control criteria. Although below quantitation limits, the values for arsenic and selenium are (UJ) coded as not detected since they did not meet quality control criteria either.

REFERENCES

1. Region VII, "Standard Operating Procedure No. 1610.2A, Three Levels of Data Review" by Larry Marchin, May 3, 1989.

SUPERFUND RECORDS



40150344

2. U.S. EPA, "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses", July 1, 1988.
3. U.S. EPA, Office of Emergency and Remedial Response, "Quality Assurance/Quality Control Guidelines for Removal Activities", (OSWER Directive 9360.4-01), Washington, D.C.

ATTACHMENTS

Summary of Sample Results
Data Review for Total Metals and Cyanide

REVIEW OF DATA FOR TOTAL METALS AND CYANIDE

These data were reviewed according to the "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses", July 1, 1988, revision. CLP protocol was requested and was followed for total metals in soil.

Laboratory: General Physics Corporation, Gaithersburg, MD
Analyses: 23 TCL Metals
Cyanide
Matrix: Wood Shavings
Sample #: BVXFQ064, BVXF1065

Holding Times

All holding times for metals and cyanide were met.

Calibration

The correct number of blanks and standards were run for each of the analyses. Correlation coefficients all met criteria.

The initial and continuing calibration verification standards (ICV and CCV) were all within control limits.

Blanks

All blanks had some contaminants (chromium, manganese) that were above the IDL but sample results were more than 5 times greater than the blank values so sample results are not coded. All blanks were run at appropriate intervals.

ICP Interference Check Sample (ICS)

All ICS results fall within required control limits and were run at appropriate intervals.

Laboratory Control Sample (LCS)

All LCS results fall within required specified requirements.

Duplicate Sample Analysis

All results were within control limits.

Matrix Spike Sample Analysis

All matrix spike recoveries were within required control limits, except manganese and cyanide which were outside control limits. These analytes are therefore (J) coded as estimated values. Arsenic and selenium are (UJ) coded as not detected because they did not meet quality control criteria due to low spike matrix recoveries and sample results that are below the IDL. It should also be noted that these elements were below quantitation limits anyway.

GP Work Order # 91-05-073

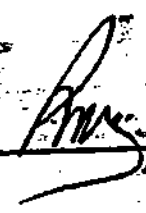
SAMPLE ANALYSIS REPORT

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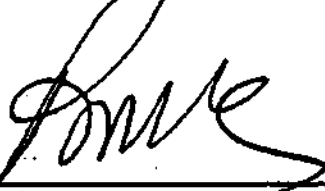
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May 28, 1991



Annides, Laboratory Director

**GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS**

Page 2

GP ID: 9105073-01A
Client ID: 8VXFQ064

Matrix: WOOD_SHAVING
Collected: 05/09/91

Element	Method	Result	Det.Lim.	Units	Digested	Analyzed by
Aluminum	MCAW 200.7	BQL	19.500	mg/Kg	05/15/91	PM - 05/23/91
Barium	MCAW 200.7	13.200	1.870	mg/Kg	05/15/91	TS 05/22/91
Beryllium	MCAW 200.7	BQL	0.330	mg/Kg	05/15/91	DM 05/24/91
Cadmium	MCAW 200.7	BQL	1.060	mg/Kg	05/15/91	TS 05/22/91
Calcium	MCAW 200.7	697.000	61.400	mg/Kg	05/15/91	TS 05/22/91
Chromium	MCAW 200.7	BQL	2.070	mg/Kg	05/15/91	PM - 05/23/91
Cobalt	MCAW 200.7	BQL	4.880	mg/Kg	05/15/91	PM - 05/23/91
Copper	MCAW 200.7	8.900	1.890	mg/Kg	05/15/91	TS 05/22/91
Iron	MCAW 200.7	38.300	8.280	mg/Kg	05/15/91	TS 05/22/91
Magnesium	MCAW 200.7	152.000	30.600	mg/Kg	05/15/91	TS 05/22/91
Manganese	MCAW 200.7	106.000	1.110	mg/Kg (M)	05/15/91	PM 05/23/91
Nickel	MCAW 200.7	BQL	6.950	mg/Kg	05/15/91	PM 05/23/91
Vanadium	MCAW 200.7	BQL	4.140	mg/Kg	05/15/91	TS 05/23/91
Zinc	MCAW 200.7	13.900	3.470	mg/Kg	05/15/91	TS 05/22/91
Antimony	MCAW 204.2	4.0900	2.4000	mg/Kg	05/15/91	TS 05/16/91
Arsenic	MCAW 206.2	BQL	0.5300	mg/Kg (M)	05/15/91	MG 05/15/91
Lead	MCAW 239.2	0.5680	0.4200	mg/Kg	05/15/91	HP 05/17/91
Mercury	MCAW 245.5	BQL	0.1100	mg/Kg	05/15/91	MGP 05/15/91
Potassium	MCAW 258.1	413.0000	80.1000	mg/Kg	05/15/91	HP 05/23/91
Selenium	MCAW 270.2	BQL	0.5600	mg/Kg (M)	05/15/91	TS 05/16/91
Silver	MCAW 272.2	22.8000	1.3400	mg/Kg	05/15/91	TS 05/16/91
Sodium	MCAW 273.1	1220.0000	53.4000	mg/Kg	05/15/91	HP 05/23/91
Thallium	MCAW 279.2	BQL	0.4500	mg/Kg	05/15/91	TS 05/16/91

Notes and definitions for this report:
BQL = Below Quantitation Limit

**GP ENVIRONMENTAL SERVICES
METALS ANALYSIS RESULTS**

Page: 3

GP ID: 9105073-02A
Client ID: BVXF0065

Matrix: WOOD SHAVING
Collected: 05/09/91

Element	Method	Result	Det.Lim.	Units	Digested	Analized by
Aluminum	MCAW 200.7	135.000	19.900	mg/Kg	05/15/91	PM 05/23/91
Barium	MCAW 200.7	30.700	1.910	mg/Kg	05/15/91	TS 05/22/91
Beryllium	MCAW 200.7	BQL	0.340	mg/Kg	05/15/91	DM 05/24/91
Cadmium	MCAW 200.7	1.190	1.080	mg/Kg	05/15/91	TS 05/22/91
Calcium	MCAW 200.7	4090.000	62.900	mg/Kg	05/15/91	TS 05/22/91
Chromium	MCAW 200.7	5.810	2.120	mg/Kg	05/15/91	PM 05/23/91
Cobalt	MCAW 200.7	BQL	4.990	mg/Kg	05/15/91	PM 05/23/91
Copper	MCAW 200.7	40.100	1.940	mg/Kg	05/15/91	TS 05/22/91
Iron	MCAW 200.7	180.000	8.480	mg/Kg	05/15/91	TS 05/22/91
Magnesium	MCAW 200.7	258.000	31.300	mg/Kg	05/15/91	TS 05/22/91
Manganese	MCAW 200.7	74.000	1.140	mg/Kg (3)	05/15/91	PM 05/23/91
Nickel	MCAW 200.7	BQL	7.110	mg/Kg	05/15/91	PM 05/23/91
Vanadium	MCAW 200.7	BQL	3.350	mg/Kg	05/15/91	TS 05/23/91
Zinc	MCAW 200.7	30.700	3.560	mg/Kg	05/15/91	TS 05/22/91
Antimony	MCAW 204.2	5.3600	2.4600	mg/Kg	05/15/91	TS 05/16/91
Arsenic	MCAW 206.2	BQL	0.5500	mg/Kg (45)	05/15/91	NG 05/15/91
Lead	MCAW 239.2	1.2500	0.4300	mg/Kg	05/15/91	NP 05/17/91
Mercury	MCAW 245.5	BQL	0.1100	mg/Kg	05/15/91	NP 05/15/91
Potassium	MCAW 258.1	638.0000	82.1000	mg/Kg	05/15/91	NP 05/23/91
Selenium	MCAW 270.2	BQL	0.5700	mg/Kg (45)	05/15/91	TS 05/16/91
Silver	MCAW 272.2	8.2700	0.5500	mg/Kg	05/15/91	TS 05/16/91
Sodium	MCAW 273.1	4220.0000	54.7000	mg/Kg	05/15/91	NP 05/21/91
Thallium	MCAW 279.2	BQL	0.4600	mg/Kg	05/15/91	TS 05/16/91

Notes and definitions for this report:
BQL = Below Quantitation Limit

GP ENVIRONMENTAL SERVICES
WET CHEMISTRY ANALYSIS RESULTS

Page: 4

GP ID: 9105073-01A
Client ID: BVXF0064

Collected: 05/09/91
Matrix: WOOD_SHAVING

Parameter	Method	Result	Det.Lim.	Units	Analyzed by
Percent Solids	NCAW 160.3	89.840		%	CM 05/17/91 02:00:00
Total Cyanide	SOM390/335.2	(J) 45.4	4.45	mg/Kg	FU 05/21/91

GP ID: 9105073-02A
Client ID: BVXF0065

Collected: 05/09/91
Matrix: WOOD_SHAVING

Parameter	Method	Result	Det.Lim.	Units	Analyzed by
Percent Solids	NCAW 160.3	87.730		%	CM 05/17/91 02:00:00
Total Cyanide	SOM390/335.2	(J) 102	22.8	mg/Kg	FU 05/21/91

Notes and definitions for this report:
BQL = Below Quantitation Limit

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION V

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